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EXAMINER	
STOREY, WILLIAM C	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/805,324	KITAMURA ET AL.	
	Examiner	Art Unit	
	WILLIAM C. STOREY	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 & 8 (and dependents and claims with similarly-contentious limitations) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains material which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention at the time the invention was filed. A patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor's obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed to put the public in possession of what the applicant claims as the invention. Further, the written description requirement promotes the progress of the useful arts by ensuring that patentees adequately describe their inventions in their patent specifications in exchange for the right to exclude others from practicing the invention for the duration of the patent's term. The claims refer to newly-inserted limitations like counting a number of reading operations for reading out the printing data from the buffer memory and calculating a read address in accordance with, among other things, the number of reading operations counted. No specific and sufficient support was provided by the applicant in his or her remarks for the newly-

entered limitations. Please provide proper written description support for the newly-entered matter into the claims. Please do so so that it is clear as to what exactly provides support for the language choices (for example, what are the reading operations, what is the number, etc.).

3. Claim 1,8 (and dependents and claims with similarly-contentious limitations) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains material which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention at the time the invention was filed. A patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor's obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed to put the public in possession of what the applicant claims as the invention. Further, the written description requirement promotes the progress of the useful arts by ensuring that patentees adequately describe their inventions in their patent specifications in exchange for the right to exclude others from practicing the invention for the duration of the patent's term. The applicant did not provide specific and sufficient support in the remarks for the newly-entered claim material. Please provide proper written description support for the head parameter unit storing information as claimed for each of various types of printheads. References to the "head parameter unit" in the specification refer storing for "the" (notifying singular) printhead. Additionally, please provide proper written description support for the head

parameter unit *driving* a selected printhead of various types of print heads rather than merely storing information for a printhead. Further, there is a specifically-defined driving control means claimed which is claimed as acting according to the information stored in said head parameter unit.

4. Claim 1,8 (and dependents and claims with similarly-contentious limitations) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains material which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention at the time the invention was filed. A patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor's obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed to put the public in possession of what the applicant claims as the invention. Further, the written description requirement promotes the progress of the useful arts by ensuring that patentees adequately describe their inventions in their patent specifications in exchange for the right to exclude others from practicing the invention for the duration of the patent's term. The applicant did not provide specific and sufficient support in the remarks for the newly-entered claim material. Please provide proper written description support for storing information on an interval of *adjacent* printing element of the *concurrently* drivable printing elements. The applicant has attempted to define in his or her remarks dated 4/14/09 on pg. 8 that "the number of concurrently drivable printing elements corresponds to the number of broken-

line rectangular areas in a single column," which in the particularly-referenced example of fig. 10, equals 3. It is noted that of those "concurrently drivable printing elements" at least in the referenced example, none are adjacent. Please provide written description support for storing an interval of adjacent and concurrently drivable printing elements.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 & 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claim limitations are indefinite surrounding newly-entered claim language. For example, it is unclear as to what exactly a number of reading operations for reading out the printing data is to refer. Is this to refer to portions of data stored in the memory (if so, what is the portion), to the entire buffer memory, etc.?

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura et al. (US 6341843), hereinafter referred to as Takemura, in view of Kato et al. (US 6009845), hereinafter referred to as Kato with further support provided by the applicant's admitted prior art.

Regarding claim 1, Takemura discloses A printing apparatus which performs printing by scanning a carriage that supports a printhead having a plurality of printing elements arrayed in a predetermined direction (figure 4, column 13, line 22), on a printing medium in a direction perpendicular to the predetermined direction (column 9, lines 44-45), comprising: a buffer memory which has a storage area corresponding to each printing element and stores printing data stored in said printing data memory (column 16, 55-57);

a head parameter unit for driving a selected printhead of various types of printheads (as will be seen from following citations and/or discussions, driving parameters or other information *for* driving a selected printhead may be stored in what will be determined as a head parameter unit. Thus, the head parameter unit, including its stored information, may be said to be *for* driving a selected printhead. A user may select a printhead from various printheads for use. Takemura discusses his or system usable for different various types of print head (col. 48, lines 60-67 and col. 49, lines 1-37 discusses use of various printheads in the system.) The system and head parameter unit may be capable of dealing a selected printhead from various types of printheads.) which stores information on a number of concurrently drivable printing elements according to distributed driving for each of the various types of printheads, and interval of adjacent printing elements of the concurrently drivable printing elements of each of the various types of the printheads and a number of a plurality of printing elements of each of the various types of the printheads (the memory structure of fig. 13 at least may provide for the head parameter unit. However, a box for a name may be

drawn around anything, wherein the encompassed components reside under the associated title of "head parameter unit." (column 37, lines 60-61, column 38, lines 40-47, 63-67, column 41, lines 7-13, Col. 77, lines 42-45. These previous citations also discuss how information may be for different printheads (each one when installed). Takemura discloses printing at different resolutions, and correspondingly the nozzles printing with a different driving sequence. (Col. 77, lines 42-45 discloses that the resolution may automatically be determined based on the head configuration of print heads). For example, Takemura discloses driving every 2 nozzles in sequence, which may read on wherein the printhead performs distributed driving for a predetermined number of nozzles, as disclosed at column 56, lines 59-61. Inherently, information on this interval is stored in fig. 13. For example, at least RAM 129 stores each nozzle firing sequence (col. 56, lines 30-32) and/or col. 49, lines 5-37 stores information for driving pulse sequences and parameters such as nozzle configuration, ink type, and resolution, which may lead to an interval use of nozzles, such as 2. The interval is of adjacent printing elements (2) of the concurrently drivable printing elements (all of the elements are capable of being concurrently driven (they are concurrently drivable considering following discussions) (for example, for a high resolution printing)). Takemura discloses arranging the nozzles at a slant to preserve power; and sequentially driving the nozzles, rather than simultaneously to produce a vertical line (col. 13, lines 25-31). Though Takemura provides this benefit over the known set up of not using a slight slant, and allowing for firing the nozzles at once (concurrently) for the production of a vertical line, it would have been at least obvious to one of ordinary skill in the art at the time the

invention was made to provide the non-slanted, vertical set-up at least for the purpose of providing a speed improvement. If nozzle displacement due to the slant would not have to be waited for in sequentially printing a line, but rather, the line could be printed all at once, this would provide an increase in speed. Thus, the number of elements according to distributed driving for the printhead would be concurrently drivable. In addition, col. 48, lines 59-67 and col. 49, lines 1-10, lines 45-50, lines 60-65, col. 53, lines 27-48 show more parameters containing information on a number of concurrently drivable printing elements (nozzles.) Tables are pre-stored that pertain to driving of the nozzles. In addition, data can be modified, and it would have at least been obvious to one of ordinary skill in the art to save that modified data if necessary in order to be able to perform printing quicker for the similar scenario without have to wait for extra processing and calculation. Similarly, buffer control tables are sent and registered in the printer (col. 56, lines 13-16) and it would have similarly been at least obvious to store that information for further use that would be fulfilled quicker. As the printing system stores parameters and/or information for the printhead, inherently there is a head parameter unit. The information stored pertains to both a number of concurrently drivable printing elements and a number of the plurality of printing elements, as claimed. (Both are part of the same group of overall nozzles. The information stored pertains to the nozzles. The number of concurrently drivable printing elements and the number of the plurality of printing elements may be one and the same. Other interpretations may be additionally provided for.) Takemura discusses how buffer readout is dependent on numerous factors. One factor is print resolution. Nozzle firing sequence is based on

the resolution. It was discussed previously how the printhead nozzles would be aligned to be able to fire all at once to create a vertical line. Further, col. 56, lines 58-61 disclose that it is necessary to fire every other nozzle at low resolution when creating a vertical line. Col. 55, lines 25-28 disclose how the buffer readout is affected by the physical arrangement of nozzles on the print head, actual nozzles used for printing (which are concurrently drivable, for example), print resolution, and the like. These must be known quantities to accordingly affect the readout. When different print heads with different numbers of nozzles are used, the system is shown to adjust the buffer read out accordingly (fig. 43d, col. 54, lines 23-31 pertains to a 136 nozzle printhead; fig. 43f, col. 55, lines 60-62 pertains to a print head comprised of 128 nozzles). As the buffer and/or buffer read out setup has been shown to correspond with the number of nozzles (at least buffer height, buffer offset, etc.), inherently a number of the plurality of printing elements must be known. Further, it has previously been discussed how information on the nozzle alignment, etc. may be determined for the print head. Additionally, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to provide storing information pertaining to the print head, such as a number of the plurality of printing elements (nozzles, for example) and/or a number of concurrently drivable printing elements according to distributed driving for the purpose of providing greater intelligence and/or awareness for the system.);

and a counter which counts a number of reading operations for reading out the printing data from said buffer memory (Takemura discusses accessing data from the buffer according to addresses. (for example, refer to fig. 43D which shows buffer

offsets that must inherently be counted (for example, +13, +1, etc.) from a start position, col. 16, lines 62-64 describes the print buffer being addressed,) Inherently, there must be some type of "counter" in order to count the reading operations for reading out the printing data from said buffer memory in order to access the addressable elements and keep track of the distance between addresses and/or the numeric addresses. Nonetheless, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to provide a counter for counting a number of reading operation for reading out the printing data from said buffer memory for the purpose of keeping track of what numerical address to access and incrementing or decrementing the counted addresses in order to access the numerical addresses. Further, the applicant states use of a counter that may set a start address (and obviously, counting accordingly for addressing other readings of addresses from the buffer serving a similar purpose as previously discussed for a counter) is well known in the art (pg. 4, lines 19-26).)

and a buffer controller which controls, in accordance with the information stored in said head parameter unit, processing of reading out the printing data stored in said printing data memory and storing the printing data in said buffer memory, and processing of reading out the printing data stored in said buffer memory (column 53, lines 35-38, column 16, lines 55-57, 62-64, column 54, lines 18-19, 57-58, column 55, lines 5-9. Takemura discloses that print head configuration determines buffer read out and placement. Since Takemura also disclosed read out and placement from the print data store to the buffer based on the storage locations dictated in the print buffer, and

that the head configuration dictated gaps in the buffer, then this would read on claimed in accordance with the information stored in said head parameter unit, processing of reading out the printing data stored in said printing data memory and storing the printing data in said buffer memory. Takemura discloses that the buffer readout sequence is change in correspondence with the change in nozzle firing sequence; as disclosed at column 82, lines 15-18, column 83, lines 25-34 and figure 47. It was previously discussed how the buffer readout is adjusted based on the nozzles that are actually used for printing and/or the resolution. It was previously discussed how for low resolution, only every other nozzle is used. Additionally, it was disclosed how the buffer readout differs based on the number of nozzles. Thus, the buffer controller acts in accordance with the information stored in said head parameter unit, as claimed.);

and driving control means for controlling the distributed driving of the plurality of printing elements in the printhead according to the information stored in said head parameter unit (it was disclosed earlier how information about print head driving is stored (thus inherently storing information about driving the plurality of printing elements in the printhead). Fig. 43a, col. 49, lines 51-65 disclose an example of how the information stored about driving the elements is used to provide control for the driving control means. In addition, as it was discussed previously how the modifications to the pre-stored information could be stored and the information for distributed driving and the plurality of printing elements could thus be stored and used for control. Inherently, as this information is used to print and drive the print head and nozzles, there is a driving control means.);

wherein said buffer controller calculates a read address in accordance with the number of concurrently drivable printing elements in the distributed driving of the selected printhead, the interval of adjacent printing elements of the concurrently drivable printing elements of the selected printhead, the number of the plurality of printing elements of the selected printhead in reading out the printing data stored in said buffer memory, and the number of reading operations counted by said counter (It has been discussed previously how the buffer read out is altered depending on the number of concurrently drivable printing elements in the distributed driving and the number of the plurality of printing elements. When reading out the data from the printing buffer, the calculated read addresses based on the buffer readout are used. Thus, the interval that defines which nozzles are used defines the corresponding memory addresses that are to be read from. The number of reading operations counted by the counter is also used to calculate the read address to read from (offset, start, etc.).).

Takemura did not specifically disclose a printing data memory which stores printing data of a raster format. However, Takemura did disclose a printing data memory (print data store (col. 16, lines 34-36) and discusses a “raster skip” command for skipping a number of raster lines (col. 28, lines 9-12). The examiner maintains that it was well known in the art to provide a printing data memory which stores printing data of a raster format, as taught by Kato.

In a similar field of endeavor, Kato discloses a serial printer, and image buffer access method for serial printer. In addition, Kato discloses a printing data memory which stores printing data of a raster format (column 8, lines 10-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takemura by specifically providing a printing data memory which stores printing data of a raster format, as taught by Kato, for the purpose of providing the data in the print data store in a well known format. This would allow for greater ease.

Regarding claim 2, the claim inherits everything as applied above for claim 1. In addition, the previous discussions allowed for wherein the information stored in said head parameter unit includes at least the number of nozzle arrays of the printhead, the number of nozzles which constitute the nozzle arrays, and nozzles to be driven in the nozzle arrays. Takemura discloses the printer having pre-loaded information for many different types of print heads (column 48, lines 65-66). In addition, Takemura discloses above reading a print head ID in order to determine characteristics about the print head. Takemura also discloses being able to receive new parameters such as driving information and buffer read out parameters (column 49, lines 46-50). In order to set up the print buffer to compensate for the elements of nozzle arrays as disclosed in this embodiment, it is inherent that the number of nozzle arrays, number of nozzles on those arrays, and the actual nozzles used for printing (which reads on claimed nozzles to be driven in the nozzle arrays) be a known value (disclosed above and column 55, lines 25-32). The previous discussions disclosed having such buffer setup information and parameters pertaining to the nozzles of the printhead being stored in the head parameter unit.

Regarding claim 3, Takemura and Kato disclose everything as applied above for claim 1. Takemura did not specifically disclose the buffer controller converting the raster data into column data in reading out the printing data stored in said buffer memory. However, the examiner maintains that it was well known in the art to provide the buffer controller converting the raster data into column data in reading out the printing data stored in said buffer memory, as taught by Kato.

In a similar field of endeavor, Kato discloses dealing with printing data for printing. In addition, Kato discloses the buffer controller converting the raster data into column data in reading out the printing data stored in said buffer memory (figure 3, column 8, lines 26-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takemura by specifically providing the buffer controller converting the raster data into column data in reading out the printing data stored in said buffer memory, as taught by Kato, for the purpose of providing aligning the data in a more vertical arrangement to match the alignment of nozzles in a near-vertical arrangement, reducing the load on the CPU during the transfer process, increasing speed during the transfer process, and/or improving the throughput.

Regarding claim 4, the previous disclosures disclose everything as applied above for claim 1. Takemura discloses the buffer read out specifying the buffer control sequences or tables from which data is read out from print buffer during print operation by the printer (col. 53, lines 58-60 and col. 54, lines 9-10). Further, it is disclosed that the addressed print data from the print buffer is transferred for printing from the print

heads (col. 17, lines 31-36). Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to read out the data from each address corresponding to the data in the buffer based on the read out scheme for the purpose of providing greater control.

Further, the examiner maintains that it was well known in the art to provide reading out the printing data stored in said buffer from each address, as taught by Kato.

In a similar field of endeavor, Kato discloses an image buffer access method for serial printer. In addition, Kato discloses the buffer controller reading out the printing data stored in said buffer from each address (column 8, lines 28-35, column 9, lines 13-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previous disclosures as necessary by specifically providing reading out the printing data stored in said buffer from each address, as taught by Kato, for the purpose of providing matched access to print data.

Regarding claim 6, Takemura and Kato disclose everything as applied above for claim 4. Whether or not Takemura provides for such a limitation, the examiner maintains that it was well known in the art to provide wherein said buffer controller includes a register which holds, by a plurality of addresses, data of predetermined bits read out by accessing each address of said buffer memory, as taught by Kato.

In addition, Kato discloses at the print timing, a set of data comprising of a plurality of bytes, which comprises bits, for C, M, Y, and K color nozzles, which are used for sequential addresses, are read from the image buffer, and at the same time, are

transferred to the head data register, which reads on claimed wherein said buffer controller includes a register which holds, by a plurality of addresses, data of predetermined bits read out by accessing each address of said buffer memory, as disclosed at column 13, lines 1-8. It is inherent that some buffer control much be exerted in order to control the buffer to do anything, thereby reading on claimed buffer controller.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previous disclosures if necessary by specifically providing wherein said buffer controller includes a register which holds, by a plurality of addresses, data of predetermined bits read out by accessing each address of said buffer memory, as taught by Kato, for the purpose of synchronously transmitting data at specific timing.

Regarding claim 7, the claim inherits everything as applied above for claim 1. Takemura discloses the buffer read out specifying the buffer control sequences or tables from which data is read out from print buffer during print operation by the printer (col. 53, lines 58-60 and col. 54, lines 9-10). Further, it is disclosed that the addressed print data from the print buffer is transferred for printing from the print heads (col. 17, lines 31-36). As print data is transferred from the buffer memory to the printhead, inherently, there must be a transfer means for doing so. Further, the examiner maintains that it was well known in the art to provide a transfer means for transferring the data read out from said buffer memory to the printhead, as taught by Kato.

In a similar field of endeavor, Kato discloses a printer and image buffer access method. In addition, Kato discloses a printing data memory which stores printing data of a raster format and the buffer memory storing raster data of predetermined bits in correspondence with the respective printing elements (column 8, lines 10-13, column 7, lines 44-49); and transfer means for transferring the data read out from said buffer memory to the printhead (column 9, lines 20-23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takemura by specifically providing a transfer means for transferring the data read out from said buffer memory to the printhead, as taught by Kato, for the purpose of providing the data in the print data store and buffer in a well known format and transferring data to the printhead from the buffer memory, thus providing compatibility and greater efficiency.

Regarding claim 8, changing an apparatus to a method does not make a claim patentably distinct. The claim is rejected based upon similar reasoning as applied above for claim 1.

Response to Arguments

Regarding the applicant's response to the previous drawing objection, it is noted that the applicant makes some descriptions that have not been supported with specific bearing in the specification or figures. For example, "the counter counts up the value by 1. Then printing data is read out from addresses 1, 9 and 17 (corresponding to nozzles 2, 10 and 18). The counter value is again increased by 1 and becomes 2. The reading operations are repeated until reading data from addresses 7, 15 and 23 is completed. At

that time, the counter value becomes 8." Where is this coming from? Previously, the applicant had only cited pg. 24, lines 11-20 and figs. 2 and 10, which do not provide such a description. Additionally, the applicant makes the conclusion that pg. 23-25 provides for the conclusion "Thus, the present invention can be usable with various types of printheads." However, such a citation does not specify that a different printhead is being used only that a buffer is accessed every five addresses instead of nine, pertaining to nozzles that are driven. Presumably, a singular printhead could have different nozzles driven?

3. Applicant's arguments with respect to matter newly-entered into the claims have been considered but are moot in view of the new ground(s) of rejection.

4. Regarding the discussion for claim 1 (and similarly-limited and dependent claims), the substance of the applicant's first proposal regarding the claim(s) surrounds the idea that Takemura cannot accept various types of printheads that differ from each other at least in view of the number of printing elements, the number of concurrently drivable printing elements, and the interval of adjacent printing elements of the concurrently drivable printing elements. First, the applicant has not claimed that various types of printheads that differ in the ways argued are used. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., various types of printheads that differ in the ways argued are used) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed.

Cir. 1993). The applicant only claims pertaining to a selected printhead of various types of printheads. It is not claimed that they differ in the ways argued.

5. Further arguments presented by the applicant pertain to limitations that are newly-entered and have been thus newly-compensated for. The rejection of the claims shall provide the new discussion addressing the new limitations.

6. Even further, the applicant has not provided any rationale or reasoning with respect to the newly-entered limitations, only conclusory statements that "Takemura fails to disclose or suggest" or such ilk. As such, the examiner respectfully refers to the applicant to the rejection of the claims for discussion pertaining to how the newly-entered matter may be provided for.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM C. STOREY whose telephone number is (571)270-3576. The examiner can normally be reached on Monday - Friday Eastern Standard Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Y. Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C Storey/
Examiner, Art Unit 2625

William C Storey
Examiner
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/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625